

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF COUNTDOWN PEDESTRIAN SIGNALS HEADS, APS PUSHBUTTONS AND SIGNS ALONG THE NORTH LEG OF THE INTERSECTION. MD 5 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THIS INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN ALTERNATE PEDESTRIAN PHASE FOR THE NORTH LEG OF THE INTERSECTION. THE MD 5 SOUTHBOUND LEFT TURNS OPERATE IN EXCLUSIVE PHASING.

CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER WITH TELEMETRY CABLE HOUSED IN A POLE MOUNTED CABINET SHALL REMAIN. A 2-WIRE APS CENTRAL CONTROL UNIT SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY SHA.

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 5 (THREE NOTCH RD):

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS THREE NOTCH AT MOHAWK. WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTACT PERSONS FOR DISTRICT #5 ARE AS FOLLOWS:

MS. KIMBERLY TRAN  
ASSISTANT DISTRICT ENGINEER-TRAFFIC  
PHONE: (410) 841-1019

MR. JOSEPH GECKLE  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (410) 841-1013

MR. JAMES FOLDEN  
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
PHONE: (410) 841-1031

CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

MR. AVIJIT MAJI  
DIVISION CHIEF,  
TRAFFIC OPERATIONS  
(410)787-7630

MR. ROBERT SNYDER  
ASSISTANT DIVISION CHIEF,  
TRAFFIC OPERATIONS  
(410)787-7631

MR. ED RODENHIZER  
CHIEF, SIGNAL OPERATIONS  
(410)787-7650

MR. EUGENE BAILEY  
CHIEF, SIGN OPERATIONS  
(410)787-7676

EQUIPMENT LIST "A, B & C"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
9570	SHEET ALUMINUM GROUND MOUNTED SIGN 1 - R4-7 24"x30" 2 - R4-7 36"x48" 1 - OM1-3 FY 18"x18"	SF	32
9571	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN 4 - R10-3(1) 9"x15" 1 - M1-5(6) 36"x72" 1 - M1-5(6) 24"x48"	SF	30
9272	SHEET ALUMINUM SPAN MOUNT 1 - D-3(1) 84"x16"	SF	10

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	1
5003	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS	LF	90
5004	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	190
8002	2-WIRE CENTRAL CONTROL UNIT	EA	1
8008	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS	EA	4
8009	BREAKAWAY PEDESTAL POLE (ANY SIZE)	EA	4
8018	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	2
8027	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)	EA	1
8041	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	250
8043	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	50
8044	WOOD SIGN SUPPORTS UP TO 4' X 6'	LF	59
8045	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)	SF	69
8047	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	330
8051	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	3
8056	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	3
8058	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	820
8060	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	440

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASING CHART

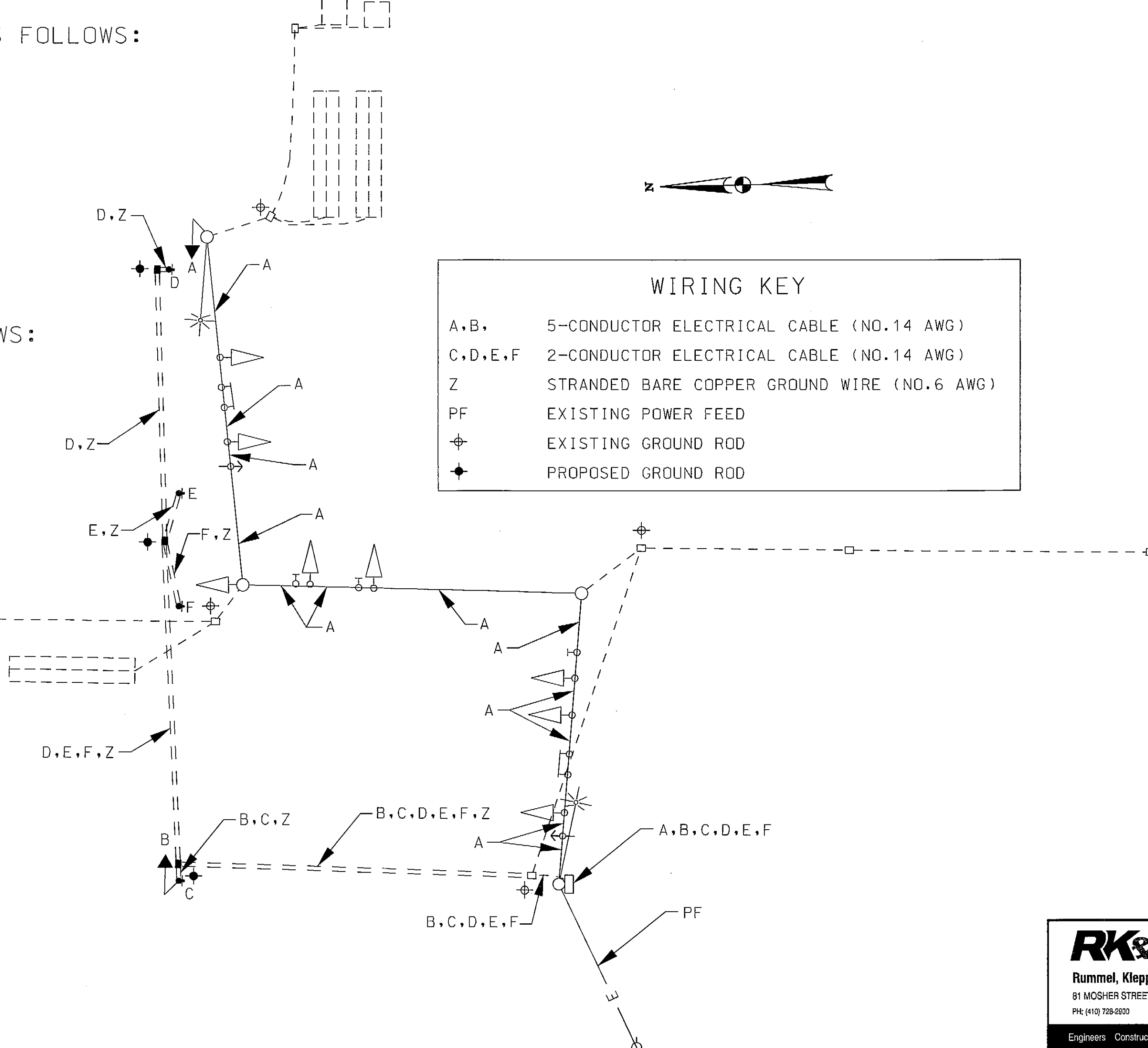
	1	2	3	4	5	6	7	8	9	10
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
PHASE 2 AND 5	R	R	+G-	+G-	G	G	R	R	DW	DW
2 AND 5 CHANGE	R	R	+Y-	+Y-	G	G	R	R	DW	DW
PHASE 2 AND 6	G	G	+R-	+R-	G	G	R	R	DW	DW
2 AND 6 CHANGE	Y	Y	+R-	+R-	Y	Y	R	R	DW	DW
PHASE 4	R	R	+R-	+R-	R	R	G	G	DW	DW
4 CHANGE	R	R	+R-	+R-	R	R	Y	Y	DW	DW
PHASE 4 ALT	R	R	+R-	+R-	R	R	G	G	WK	WK
PED CLEARANCE	R	R	+R-	+R-	R	R	G	G	FL/DW	FL/DW
4 ALT CHANGE	R	R	+R-	+R-	R	R	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL +R-	FL +R-	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK

GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
- ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
- UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
- ALL PEDESTAL FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE.
- LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SECTION 4E-10, MUTCD FIGURES 4E-3 AND 4E-4, AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
- PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
- THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON. NOT CENTER OF POLE TO CENTER OF POLE.
- PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
- THE CONTRACTOR SHALL CONTACT ED RODENHIZER AT THE SIGNAL SHOP (410) 787-7652 TO DELIVER APS EQUIPMENT FOR TESTING.

WIRING KEY

- A,B, 5-CONDUCTOR ELECTRICAL CABLE (NO.14 AWG)  
C,D,E,F 2-CONDUCTOR ELECTRICAL CABLE (NO.14 AWG)  
Z STRANDED BARE COPPER GROUND WIRE (NO.6 AWG)  
PF EXISTING POWER FEED  
⊕ EXISTING GROUND ROD  
◆ PROPOSED GROUND ROD



**SHA**

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

MD 5 (THREE NOTCH RD) AT MOHAWK DRIVE  
CHARLOTTE HALL, MARYLAND

REVISIONS	GENERAL INFORMATION SHEET		
	SCALE <u>NONE</u>	DATE <u>DECEMBER 2012</u>	CONTRACT NO. <u>XY1395185</u>
	DESIGNED BY <u>GS</u>	COUNTY <u>ST MARY'S</u>	
	DRAWN BY <u>GS</u>	LOGMILE <u>18000545.12</u>	
	CHECKED BY <u>BJG</u>	TIMS NO. <u>L611</u>	
	FAP NO. <u></u>	TOD NO. <u></u>	
	TS NO. 2299C-G1	DRAWING SP-2	OF 2 SHEET NO. 2 OF 2

**RK&K**

Rummel, Klepper & Kahl, LLP  
81 MOSHER STREET | BALTIMORE, MD 21217  
PH: (410) 728-2200 FAX: (410) 728-3100

Engineers Construction Managers Planners Scientists  
www.rkk.com